

Appln. Serial No. 09/995,294
Amendment Dated March 19, 2008
Reply to Office Action Mailed December 21, 2007

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AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

- 1 1. (Currently Amended) A method for characterizing a network connection
2 comprising:
3 receiving parameters that specify a network connection;
4 conveying to a protocol engine at least one of the received parameters, wherein
5 the protocol engine is to implement a protocol stack;
6 receiving state variable information from the protocol engine pertaining to the
7 network connection according to the conveyed at least one of the received parameters;
8 sensing when the network connection is initiated according to the received state
9 variable information; and
10 storing the state variable information.
- 1 2. (Currently Amended) The method of Claim 1 wherein ~~receiving state variable~~
2 ~~information comprises:~~
3 conveying to the [[a]] protocol engine a parameter at least one of the parameters
4 comprises conveying to the protocol engine including at least one of a protocol identifier, a
5 source address, a source port, a destination address and a destination port; and
6 ~~receiving from the protocol engine a state variable for the network connection~~
7 ~~according to the parameter.~~
8
- 1 3. (Original) The method of Claim 1 wherein sensing when the network connection
2 is initiated comprises monitoring the value of a state variable indicative of the connection state of
3 the connection.
- 1 4. (Original) The method of Claim 1 wherein sensing when the network connection
2 is initiated comprises monitoring the value of a TCP/IP state variable called "STATE".

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1 5. (Original) The method of Claim 1 further comprising:
2 sensing when the network connection terminates according to the state variable
3 information;
4 retrieving stored state variable information according to the network connection
5 after the network connection terminates; and
6 creating a history of the network connection according to the state variable
7 information.

1 6. (Original) The method of Claim 5 wherein creating a history of the network
2 connection comprises:
3 developing a network connection profile from the state variable information; and
4 creating a history of the network connection profile.

1 7. (Original) The method of Claim 6 wherein creating a history of the network
2 connection profile comprises detecting an exceptional event.

1 8. (Original) The method of Claim 7 further comprising analyzing the exceptional
2 event.

1 9. (Original) The method of Claim 1 further comprising:
2 retrieving the state variable information while the network connection continues;
3 and
4 making the state variable information available on a periodic basis.

1 10. (Original) The method of claim 9 further wherein making state variable
2 information available comprises:
3 creating a dynamic profile of the network connection according to the state
4 variable information; and
5 making the dynamic profile available on a periodic basis.

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1 11. (Currently Amended) A network connection analysis unit capable of
2 characterizing a network connection, said network connection analysis unit comprising:
3 a supervisor comprising:
4 a command register to receive ~~capable of receiving~~ parameters that specify
5 a network connection, and
6 a source address register to receive ~~capable of receiving~~ an address
7 referencing the location of state variables in a state memory;
8 a supervisory controller to ~~capable of:~~
9 directing direct a state variable request to a protocol engine
10 according to the parameters, wherein the protocol engine is to implement a protocol stack;
11 receive the state variables provided by the protocol engine in
12 response to the state variable request;
13 ~~sensing sense~~ when the network connection is initiated by
14 monitoring a location in the state memory as referenced by the contents of the source address
15 register, and
16 a first computer readable medium controller to direct ~~capable of directing~~
17 a plurality of ~~the~~ state variables from the state memory to a computer readable storage medium
18 when the network connection is initiated.

1 12. (Currently Amended) The network connection analysis unit of Claim 11 wherein
2 the command register generates parameters including at least one of a protocol identifier, a
3 source address, a source port, a destination address and a destination port and wherein the
4 controller is to further load ~~capable of loading~~ into the source address register a memory
5 reference received from ~~[[a]]~~ the protocol engine.

1 13. (Original) The network connection analysis unit of Claim 11 wherein the state
2 memory referenced by the source address register contains an indicator of activity of the network
3 connection.

1 14. (Original) The network connection analysis unit of Claim 11 wherein the state
2 memory referenced by the source address register contains a TCP/IP state variable called
3 "STATE".

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1 15. (Currently Amended) The network connection analysis unit of Claim 11 further
2 comprising an off-line connection analyzer comprising:

3 an off-line command register to receive ~~capable of receiving~~ an off-line analysis
4 request that includes a connection specifier;

5 an off-line computer readable medium controller to retrieve ~~capable of retrieving~~
6 state variables from a computer readable medium according to the connection specifier;

7 a format table to convert ~~capable of converting~~ the state variables into a print
8 stream;

9 an off-line analysis controller to cause ~~capable of causing~~ the second computer
10 readable medium controller to retrieve state variables and further to direct ~~capable of directing~~
11 the retrieved state variables to the format table.

1 16. (Currently Amended) The network connection analysis unit of Claim 15 wherein
2 the format table includes a profile description that correlates one or more state variables to a
3 connection profile.

1 17. (Currently Amended) The network connection analysis unit of Claim 16 wherein
2 the off-line connection analyzer further comprises an exceptional event detector to detect ~~capable~~
3 ~~of detecting~~ an exceptional event.

1 18. (Currently Amended) The network connection analysis unit of Claim 17 wherein
2 the exceptional event detector is to analyze ~~capable of analyzing~~ the exceptional event.

1 19. (Currently Amended) The network connection analysis unit of Claim 11 further
2 comprising a real-time connection analyzer comprising:

3 a real-time command register to receive a ~~capable of receiving~~ an real-line
4 analysis request that includes a connection specifier;

5 a real-time computer readable medium controller to retrieve ~~capable of retrieving~~
6 state variables from a computer readable medium according to the connection specifier; and

7 a display subsystem to generate ~~capable of generating~~ a display signal according
8 to the retrieved state variables.

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1 20. (Currently Amended) The network connection analysis unit of Claim 19 wherein
2 the display subsystem comprises:

3 a profile generator to create ~~capable of creating~~ a profile of a network connection.

1 21. (Currently Amended) A network connection analysis system comprising:

2 a memory to store ~~capable of storing~~ instructions;

3 a processor to execute ~~capable of executing~~ instructions stored in the memory;

4 and

5 a network connection characterization instruction sequence that, when executed
6 by the processor, minimally causes the processor to:

7 receive parameters that specify a network connection;

8 convey to a protocol engine at least one of the received parameters,

9 wherein the protocol engine is to implement a protocol stack;

10 receive state variable information from the protocol engine pertaining to
11 the network connection according to the conveyed at least one of the received parameters;

12 sense when the network connection is initiated according to the received
13 state variable information; and

14 store the state variable information.

1 22. (Currently Amended) The network connection analysis system of Claim 21

2 wherein ~~the at least one of the parameters includes the network connection characterization~~

3 ~~instruction sequence includes a state variable information receiver instruction sequence that,~~

4 ~~when executed by the processor, causes the processor to receive state variable information by~~

5 ~~minimally causing the processor to:~~

6 convey to a protocol engine a parameter including at least one of a protocol
7 identifier, a source address, a source port, a destination address and a destination port; ~~and~~

8 ~~receive from the protocol engine state variables for the network connection according to the~~
9 ~~parameter.~~

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1 23. (Original) The network connection analysis system of Claim 21 wherein the
2 network connection characterization instruction sequence causes the processor to sense when the
3 network connection has been initiated by minimally causing the processor to monitor the value
4 of a state variable that is indicative of the connection state of the connection.

1 24. (Original) The network connection analysis system of Claim 21 wherein the
2 network connection characterization instruction sequence causes the processor to sense when the
3 network connection has been initiated by minimally causing the processor to monitor the value
4 of a TCP/IP state variable called "STATE".

1 25. (Original) The network connection analysis system of Claim 21 further
2 comprising an off-line connection analysis instruction sequence that, when executed by the
3 processor, minimally causes the processor to:
4 sense when the network connection terminates according to the state variable
5 information;
6 retrieve stored state variable information after the network connection terminates;
7 and
8 create a history of the network connection according to the state variable
9 information.

1 26. (Original) The network connection analysis system of Claim 25 wherein the off-
2 line connection analysis instruction sequence comprises a network connection profile creation
3 instruction sequence that, when executed by the processor, causes the processor to create a
4 history by minimally causing the processor to:
5 develop a network connection profile from the state variable information; and
6 create a history of the network connection profile.

1 27. (Original) The network connection analysis system of Claim 26 wherein the
2 network connection profile creation instruction sequence comprises an exceptional event
3 detection instruction sequence that, when executed by the processor, minimally causes the
4 processor to detect an exceptional event.

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1 28. (Original) The network connection analysis system of Claim 27 wherein the
2 network connection profile creation instruction sequence further comprises an exceptional event
3 analysis instruction sequence that, when executed by the processor, minimally causes the
4 processor to analyze the exceptional event.

1 29. (Currently Amended) The network connection analysis system of Claim 21
2 further comprising:
3 a display driver to ~~generate~~ generate capable of generating a display signal; and
4 a real-time connection analysis instruction sequence that, when executed by the
5 processor, further minimally causes the processor to:
6 retrieve the state variable information while the network connection
7 continues; and
8 direct the state information to the display driver.

1 30. (Original) The network connection analysis system of Claim 29 wherein the real-
2 time connection analysis instruction sequence comprises a dynamic profile generation instruction
3 sequence that, when executed by the processor, minimally causes the processor to:
4 create a dynamic profile of the network connection according to the state variable
5 information; and
6 direct the dynamic profile to the display driver.

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1 31. (Currently Amended) A computer-readable storage medium having computer-
2 executable functions for characterizing a network connection comprising:
3 a network connection characterization instruction sequence that, when executed
4 by a processor, minimally causes the processor to:
5 receive parameters that specify a network connection;
6 convey to a protocol engine at least one of the received parameters,
7 wherein the protocol engine is to implement a protocol stack;
8 receive state variable information from the protocol engine pertaining to
9 the network connection according to the conveyed at least one of the received parameters
10 sense when the network connection is initiated according to the received
11 state variable information; and
12 store the state variable information.

1 32. (Currently Amended) The computer-readable storage medium of Claim 31
2 wherein the at least one of the parameters includes network connection characterization
3 ~~instruction sequence includes a state variable information receiver instruction sequence that,~~
4 ~~when executed by a processor, causes the processor to receive state variable information by~~
5 ~~minimally causing the processor to:~~
6 ~~convey to a protocol engine a parameter including~~ at least one of a protocol
7 identifier, a source address, a source port, a destination address and a destination port; and
8 ~~receive from the protocol engine state variables for the network connection~~
9 ~~according to the parameter.~~

1 33. (Currently Amended) The computer-readable storage medium network
2 ~~connection analysis system~~ of Claim 31 wherein the network connection characterization
3 instruction sequence causes the processor to sense when the network connection has been
4 initiated by minimally causing the processor to monitor the value of a state variable that is
5 indicative of the connection state of the connection.

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1 34. (Currently Amended) The computer-readable storage medium ~~network~~
2 ~~connection analysis system~~ of Claim 31 wherein the network connection characterization
3 instruction sequence causes the processor to sense when the network connection has been
4 initiated by minimally causing the processor to monitor the value of a TCP/IP state variable
5 called "STATE".

1 35. (Currently Amended) The computer-readable storage medium of Claim 31
2 further comprising an off-line connection analysis instruction sequence that, when executed by a
3 processor, minimally causes the processor to:
4 sense when the network connection terminates according to the state variable
5 information;
6 retrieve stored state variable information after the network connection terminates;
7 and
8 create a history of the network connection according to the state variable
9 information.

1 36. (Currently Amended) The computer-readable storage medium of Claim 35
2 wherein the off-line connection analysis instruction sequence comprises a network connection
3 profile creation instruction sequence that, when executed by a processor, causes the processor to
4 create a history by minimally causing the processor to:
5 develop a network connection profile from the state variable information; and
6 create a history of the network connection profile.

1 37. (Currently Amended) The computer-readable storage medium of Claim 36
2 wherein the network connection history profile instruction sequence comprises an exceptional
3 event detection instruction sequence that, when executed by a processor, minimally causes the
4 processor to detect an exceptional event.

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1 38. (Currently Amended) The computer-readable storage medium of Claim 37
2 wherein the network connection profile creation instruction sequence further comprises an
3 exceptional event analysis instruction sequence that, when executed by a processor, minimally
4 causes the processor to analyze the exceptional event.

1 39. (Currently Amended) The computer-readable storage medium of Claim 31
2 further comprising a real-time connection analysis instruction sequence that, when executed by a
3 processor, further minimally causes the processor to:
4 retrieve the state variable information while the network connection continues;
5 and
6 direct the state information to a display driver.

1 40. (Currently Amended) The computer-readable storage medium of Claim 39
2 wherein the real-time connection analysis instruction sequence comprises a dynamic profile
3 generation instruction sequence that, when executed by a processor, minimally causes the
4 processor to:
5 create a dynamic profile of the network connection according to the state variable
6 information; and
7 direct the dynamic profile to the display driver.

1 41. (Currently Amended) A network connection analysis apparatus comprising:
2 means for receiving parameters that specify a network connection;
3 means for conveying to a protocol engine at least one of the received parameters;
4 wherein the protocol engine is to implement a protocol stack;
5 means for receiving state variable information from the protocol engine pertaining
6 to the network connection according to conveyed at least one of the received ~~a set of received~~
7 network parameters;
8 means for sensing initiation of the network connection according to the received
9 state variable information; and
10 means for storing the state variable information.

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1 42. (Currently Amended) The network connection analysis apparatus of Claim 41
2 wherein the at least one of the parameters includes state-variable information receiving means
3 ~~comprises:~~
4 ~~means for conveying to a protocol engine a parameter including~~ at least one of a
5 protocol identifier, a source address, a source port, a destination address and a destination port;
6 and
7 ~~means for receiving from the protocol engine a state-variable for the network~~
8 ~~connection according to the parameter.~~

1 43. (Original) The network connection analysis apparatus of Claim 41 wherein the
2 means for sensing initiation of the network connection comprise a means for monitoring the
3 value of a state variable indicative of the connection state of a network connection.

1 44. (Original) The network connection analysis apparatus of Claim 41 wherein the
2 means for sensing initiation of the network connection comprise a means for monitoring the
3 value of a TCP/IP state variable called "STATE".

1 45. (Original) The network connection analysis apparatus of Claim 41 further
2 comprising:
3 means for sensing when the network connection terminates according to the state
4 variable information;
5 means for retrieving stored state variable information according to the network
6 connection after the network connection terminates; and
7 means for creating a history of the network connection according to the state
8 variable information.

1 46. (Original) The network connection analysis apparatus of Claim 45 wherein
2 means for creating a history of the network connection comprises: means for developing a
3 network connection profile from the state variable information; and means for creating a history
4 of the network connection profile.

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1 47. (Original) The network connection analysis apparatus of Claim 46 wherein
2 means for creating a history of the network connection profile comprises means for detecting an
3 exceptional event.

1 48. (Original) The network connection analysis apparatus of Claim 47 further
2 comprising means for analyzing the exceptional event.

1 49. (Original) The network connection analysis apparatus of Claim 41 further
2 comprising:
3 means for retrieving the state variable information while the connection
4 continues; and
5 means for making the state variable information available on a periodic basis;

1 50. (Original) The network connection analysis apparatus of Claim 49 wherein
2 means for making the state variable information available comprises:
3 means for creating a dynamic profile of the network connection according to the
4 state variable information; and
5 means for making the dynamic profile available on a periodic basis.